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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,688	11/14/2001	Takeo Morinaga	SONYJP-135	3830

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EXAMINER

NGUYEN, TANH Q

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/913,688	MORINAGA, TAKEO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tanh Q. Nguyen	2182	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 8-18,25-34,36 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,19-24,35 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/16/01</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1-7, 19-24, 35, 37 in the reply filed on January 17, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 8-18, 25-34, 36, 38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Drawings***

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-7; 19-24; 35; 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites the limitation "extracting means for extracting the packets which are recorded to a recording apparatus" in line 4-5. It is not clear whether applicant intends for the extracting means to extract the packets **to be** recorded to a recording apparatus because line 11 of claim 1 recites the limitation "transferring means for DMA-transferring said packets to said recording apparatus", or for the extracting means to extract the packets **already recorded** to a recording apparatus because of its plain meaning.

Claim 1 also recites the limitation "said packets" in line 11 and "the packets" in line 12. It is not clear whether such packets refer to packets constructing the stream, or packets recorded on the recording apparatus, or packets extracted by the extracting means. Since the claim recites "transfer means for DMA-transferring said packet to said recording apparatus", it is not likely that "said packets" refers to packets recorded on the recording apparatus.

Claim 1 recites the limitation "DMA-transferring said packets...by using the

packets as a block of a predetermined data amount" in lines 11-13. It is not clear what the limitation means. It appears that applicant intends for "DMA-transferring a block of a predetermined number of packets". Claim 2 recites the limitation "the data amount of said packets" in lines 3-4. It appears that applicant intends to mean "the number of packets". Claim 4 recites "the data amount of said packets" in line 3. It appears that applicant intends to mean "the number of packets". Claim 5 recites "the data amount of said packets" in line 3. It appears that applicant intends to mean "the number of packets".

8. Claims 19-24 generally correspond to claim 1-7, and are indefinite on the same aforementioned bases. Claims 35, 37 generally correspond to claim 1, and are indefinite on the same aforementioned bases.

9. Claim 5 recites the limitation "the predetermined capacity" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

10. The rejections that follow are based on the examiner's best interpretation of the claims. Furthermore, the examiner suggests that applicant specifically maps out the means/steps recited in the claims to either elements/steps in the disclosure/drawings in order to help the examiner appreciate the scope of the claims and further the prosecution.

#### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 3, 6-7, 19, 21, 24, 35, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA: pages 1-9 and FIG. 1).

13. As per claim 1, AAPA teaches an information processing apparatus [a digital broadcast receiving apparatus - FIG. 1] comprising:

receiving means [13, FIG. 1] for receiving a stream constructed by packets of a predetermined format;

extracting means [21, FIG. 1] for extracting the packets which are to be recorded to a recording apparatus [15, FIG. 1] from the packets constructing said stream received by said receiving means;

memory means [23, FIG. 1] for storing said packets extracted by said extracting means; and

DMA commands to access the hard disk drive [29, FIG. 1; page 8, lines 14-16], hence a command buffer for forming a command for instructing a DMA transfer, and transfer means for DMA-transferring said packets (i.e. packets in memory means) to said recording apparatus.

Since it was known in the art at the time the invention was made for a DMA transfer to specify the number of packets to be transmitted, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the DMA command formed in the command buffer to specify the number of packets in order to transfer the packets as a block of a predetermined data amount.

14. As per claim 3, AAPA teaches an input FIFO and an output FIFO, but does not specifically teach the input FIFO and the output FIFO as a single memory means. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrate the input FIFO and the output FIFO as a single memory means, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Furthermore, it was known in the art to partition a single memory means into two FIFOs when only a single memory means is available, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to partition the memory means into an input FIFO and an output FIFO - when only a single memory means is available.

15. As per claim 6, AAPA teaches DMA commands to access the hard disk drive. Since it was known in the art for DMA commands to include address information to indicate where the data is coming from (using a source address) and/or where the data is going to (using a destination address), it would have been obvious to one of ordinary skill in the art at the time the invention was made for the information processing apparatus to comprise an adding means for adding address information in the DMA commands (i.e. address in a just-previous DMA command, a current DMA command, and a just-subsequent command), in order to indicate the source of the packets and/or the destination of the packets.

16. As per claim 7, AAPA further teaches the recording apparatus being a hard disk

drive [15, FIG. 1].

17. As per claims 19, 21, 24, the claims generally corresponds to claims 1, 3, 6, 7, and are rejected on the same bases.

18. As per claims 35, 37, the claims generally correspond to claim 1 and are rejected on the same bases.

19. Claims 2, 4-5, 20, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Mergard (US 5,881,248).

20. As per claims 2, 20, AAPA does not teach the DMA command being formed when the data amount of the packets stored in the memory means reaches a predetermined capacity.

Mergard teaches forming a DMA command when the data amount of the packets stored in the memory means reaches a predetermined capacity in order to prevent the memory from overflowing [col. 7, lines 13-14].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a DMA command when the data amount of the packets stored in the memory means reaches a predetermined capacity, as is taught by Mergard, in order to prevent the memory from overflowing.

21. As per claims 4, 22, AAPA does not teach the DMA command being formed when the data amount of the packets stored in the input FIFO is equal to or larger than a predetermined capacity.

Mergard teaches forming a DMA command when the data amount of the packets stored in the input FIFO is equal to or larger than a predetermined capacity in order to



prevent the memory from overflowing [col. 7, lines 13-14].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a DMA command when the data amount of the packets stored in the input FIFO is equal to or larger than a predetermined capacity, as is taught by Mergard, in order to prevent the memory from overflowing.

22. As per claims 5, 23, AAPA does not teach the DMA command being formed when the data amount of the packets stored in the output FIFO is equal to or smaller than a predetermined capacity.

Mergard teaches forming a DMA command when the data amount of the packets stored in the output FIFO [a buffer such as that the RX FIFO [col. 7, line 2], hence the RX FIFO being just an example, and the TX FIFO can implicitly be considered as such a buffer] is equal to or smaller than a predetermined capacity in order to use a bus that otherwise would be idle to transfer data [col. 7, lines 1-12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a DMA command when the data amount of the packets stored in the output FIFO is equal to or smaller than a predetermined capacity, as is taught by Mergard, in order to use a bus that otherwise would be idle to transfer data.

23. Claims 6, 24 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Tanikawa (EP 0 275 157 A2).

24. Tanikawa teaches address registers [33, FIG. 6] designating the head address of the data for which transfer is next to begin with each end of a transfer, and an adding means [36, FIG. 6] for adding the number of transferred bytes recorded in

corresponding DMR registers [page 5, lines 29-31]. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the information processing apparatus to comprise an adding means for adding address information with the number of packets transferred in the DMA commands (DMA commands corresponding to the DMR registers), as is taught by Tanikawa, in order to indicate the end of the block of packets to be transferred for each of the DMA commands.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Quang Nguyen whose telephone number is (571) 272-4154 and whose e-mail address is [tanh.nguyen36@uspto.gov](mailto:tanh.nguyen36@uspto.gov). The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh, can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for After Final, Official, and Customer Services, or (571) 273-4154 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

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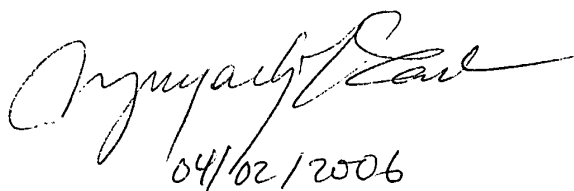
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04/02/2006

TQN  
April 2, 2006